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Mehdi Babaei

McGill University, Montreal, mehdi.babaei@mail.mcgill.ca

Arman Abednia

Edith Cowan University, aabednia@our.ecu.edu.au

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Reflective Teaching and Self-efficacy Beliefs: Exploring Relationships in the Context of Teaching EFL in Iran

Mehdi Babaei
McGill University, Canada
Arman Abednia
Edith Cowan University

Abstract: This article reports on a study that explored the relationship between reflective teaching and teachers' self-efficacy beliefs. Two questionnaires, the English Language Teaching Reflection Inventory (Akbari, Behzadpoor, & Dadvand, 2010) and Teachers' Efficacy Beliefs System-Self (TEBS-Self) (Dellinger, Bobbett, Olivier, & Ellett, 2008), were distributed among 225 Iranian EFL (English as a Foreign Language) teachers. Pearson product-moment correlation analysis showed a significant positive relationship between the general factors of teacher reflectiveness and self-efficacy. Standard multiple regression identified Efficacy for Learner Engagement as the only predictor of teacher reflectiveness and Meta-Cognitive Reflection as the only predictor of teacher self-efficacy. Finally, the interconnections between the components of the two constructs were investigated using Structural Equation Modelling. While most of the components of both variables were significantly interrelated, some were not, and Cognitive Reflection and Efficacy for Classroom Management had a negative relationship. The results are discussed in light of the literature, and suggestions for further research are presented.

Introduction

Heightened awareness of the complexity of teaching and teacher development has recently resulted in an increasing advocacy of constructivist approaches to teacher education in the literature and elevating the status of teachers to that of reflective practitioners who can theorize about their practices and practice their own theories (Griffiths, 2000; Kumaravadivelu, 2003; Wallace, 1995). Also, teachers' prior experiences and personal beliefs have come to be considered as informing their teaching ideology and practice (Freeman & Johnson, 1998), hence the growing literature on teacher related constructs such as teacher beliefs (Pajares, 1992), teacher identity (Beijaard, Meijer, & Verloop, 2004), teacher self-efficacy (Klassen, Tze, Betts, & Gordon, 2011; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998), and reflective teaching (Farrell, 2007; Richards & Farrell, 2005).

While extensive research has been conducted on reflective teaching, teacher self-efficacy, and their relationships with several variables, only few studies have investigated their own interconnections. One might assume that intuitively there is a positive relationship between reflective teaching and high self-efficacy beliefs. However, we argue that these two constructs

have a complex and unpredictable relationship. Despite the ample evidence supporting the positive impact of high self-efficacy on teaching performance and effectiveness, adopting a reflective approach to teaching entails a healthy dose of efficacy doubt (Wheatley, 2002). Therefore, low perceived efficacy sometimes encourages teachers to reflect more on how they teach and can improve their teaching. Moreover, those few studies we found in the literature have not investigated the relationship between teacher self-efficacy and reflective teaching as a major focus of research and are purely qualitative (e.g., Milner & Woolfolk Hoy, 2003; Yeh, 2006). Such dynamic concepts as efficacy beliefs and reflection lend themselves well to qualitative methods. However, quantitative research should also be conducted and its findings integrated with those of qualitative studies to help translate research findings into macro-level decisions and plans. Therefore, we conducted a correlational study of reflective teaching and efficacy beliefs across a reasonably large sample in the context of teaching EFL (English as a Foreign Language) in Iran. We explored the overall relationship between these two constructs (reflective teaching and teacher's efficacy beliefs), and the interconnections between their components. In this paper, a brief background to these two constructs is presented, followed by a report on the study and the findings.

Literature Review

Reflective Teaching

Dewey (1933) defined reflective thinking as “active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads” (p. 9). To qualify as a reflective thinker, he believed, an individual should have three major attributes: open-mindedness, responsibility, and wholeheartedness. Expanding on Dewey's conceptualization, Schon (1987, p. 31) introduced the concept of “reflection-in-action” as “a reflective conversation with the materials of a situation.” Applying these ideas in the context of education resulted in the emergence of reflective approaches to teaching. These approaches encourage teachers to make sense of different dimensions of teaching in their own ways and develop adequate autonomy to make decisions based on their situated understandings, prior experiences, and personal beliefs (Farrell, 2007). Reflective teaching involves “critical enquiry, analysis, and self-directed evaluation” (Calderhead, 1989, p. 43), often distinct from “behavioural skills and craft apprenticeship which, in contrast, emphasize the acquisition of pre-determined classroom practices” (Calderhead, 1989, p. 43). Reflective approaches to teaching encourage teachers to play the role of researchers, decision-makers, and problem-solvers (Calderhead, 1989; Zeichner, 1983). Extensive research has been conducted in this area. Some studies have reported contributions of reflection to teaching and teacher development, such as higher self-confidence (Finkel & Fletcher, 2002), deeper understanding of the complexity of teaching (Ogberg & McCutcheon, 1987), more effective self-evaluation (Francis, 1995; Genc, 2010; Jung, 2012), improved performance (Tillema, 2006), and stronger reasoning (Abednia, Hovassapian, Teimournezhad, & Ghanbari, 2013). Another group of studies has explored how to improve reflectivity in teachers and reported that effective team teaching partnership (Perry & Stewart, 2005), mentor-teacher meetings (Waring, 2013), and keeping portfolios (Mansvelder-Longayroux, Beijaard, & Verloop, 2007), among others, as conducive to teachers' reflective thinking.

Teacher Self-efficacy

Teacher self-efficacy refers to teachers' beliefs about their capabilities to effectively perform a given task to achieve desirable learning outcomes in a given situation (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). Efficacy beliefs are thought to have four main sources: mastery experiences, i.e. the experiences of achievement or failure in conducting a certain activity, vicarious experiences, which are gained through observing others' successes and failures, social persuasion, i.e. encouragement received from others about one's abilities and competencies, and emotional and physiological states such as excitement, happiness, stress, and tension (Bandura, 1997a).

Research on teacher self-efficacy has highlighted its significant relationship with several teacher behaviours and student learning (see Henson, 2001; Henson, Kogan & Vacha-Haase, 2001). High self-efficacy has been associated with teachers' perseverance in unsupportive environments (Milner & Woolfolk Hoy, 2003), high student achievement and motivation (Bandura, 1997b; Tschannen-Moran & Woolfolk-Hoy, 2007), students' high sense of efficacy (Anderson, Green & Loewen, 1988), less teacher burnout (Skaalvik & Skaalvik, 2010), commitment to teaching (Coladarci, 1992), and using alternative instruction methods and materials (Allinder, 1994). Low efficacy perceptions, on the other hand, are believed to result in decreased effort (Atay, 2007), less job satisfaction, and higher levels of occupational stress (Betoret, 2006). Research has also shown that different factors may affect teachers' sense of efficacy to varying degrees. Some of these factors are gender (Romi & Leiser, 2006), student achievement (Muijs & Reynolds, 2002), formal teacher education, and having a state-issued teaching credential (Tuchman & Isaacs, 2011).

Teacher Self-efficacy and Reflective Teaching

Scholars have explored interconnections between reflective teaching and teacher self-efficacy. Regarding contributions of reflection to self-efficacy, Stallions, Murrill, and Earp (2012) found that reflection about unexpected challenges and crises at early career stages can help teachers develop a high sense of professional efficacy. Efficacy beliefs and self-confidence can also improve through teacher reflection facilitated by guided practices (Yeh, 2006), learning community behaviours (Kennedy & Smith, 2013), microteaching (Donnelly & Fitzmaurice, 2011), mentoring, peer coaching, and self-study (Sibbald, 2008). Finally, Milner and Woolfolk Hoy (2003) found that their research participant attributed her being stereotyped and isolated by her colleagues to her achievements (e.g., having a PhD). This kind of reflection on her mastery experiences helped her to not only guard against negative effects of how she was treated but also improve her self-efficacy perceptions, a finding which has been theoretically argued for by Bandura (1997b).

Regarding the impact of self-efficacy on reflection, Thoonen, Slegers, Oort, Peetsma, and Geijssel (2011) observed that teachers' self-efficacy beliefs were the strongest motivational factor for explaining teachers' experimentation and reflection. Runhaar, Sanders, and Yang (2010) also found that teachers' perceived efficacy to deal with difficulties at work significantly accounted for their reflective thinking and asking for feedback from their managers, colleagues, or students.

Similar findings have been observed regarding other types of participants, such as learners and employees. Kitsantas and Baylor (2001), for example, found that self-reflection

about instructional planning encouraged learners to reconsider their self-efficacy beliefs and develop a more realistic understanding of their planning abilities. In the context of industry, self-efficacy was found to be the most important predictor of employees' critical reflective working behaviour, such as challenging group-think and experimentation (van Woerkom, Nijhof & Nieuwenhuis, 2002).

While the literature reviewed above suggests that extensive research has been conducted on interconnections between reflective teaching and teacher self-efficacy around the world, there is a paucity of such research in Iran. Therefore, this study aimed to explore the relationship between reflective teaching and teachers' self-efficacy beliefs and their components in the context of English as a Foreign Language (EFL) education in Iran. Our interest in investigating these interconnections across a relatively large sample of participants led us to conduct a questionnaire survey explained in the following section.

Methodology

Despite recent efforts to develop and validate new measures of teacher self-efficacy and reflective teaching (Akbari, Behzadpoor, & Dadvand, 2010; Dellinger, Bobbett, Olivier, Ellett, 2008), there is a paucity of research on the relationship between these two constructs, as mentioned above, especially in EFL contexts. To address this gap, we explored interconnections between Iranian EFL teachers' perceptions of self-efficacy and reflection as well as their components. In the section below, the participants and data collection instruments are explained, followed by a detailed account of the findings.

Participants

Data were collected from 300 participants who were teaching EFL communicative courses in seven language schools, which offered English conversation courses from elementary to advanced levels, in Tehran and Guilan provinces, Iran. Some of the questionnaires had been filled out incompletely, with 5 or more items unanswered from either of the questionnaires, and some others haphazardly, as suggested by the respondents' checking 'Moderate belief', for example, on all TEBS-Self items. These questionnaires were discarded and, as a result, the data from 225 questionnaires (120 from females and 105 from males) provided useable information for analysis. Regarding their background in education, 18 had an Associate of Arts (a two-year college degree), 99 Bachelor of Arts (a four-year university degree), 73 Master of Arts (a two-year graduate degree), and one had a PhD (a four to five-year degree) in English (Tab. 1).

The participants' teaching experience ranged from one to 30 years, with an average of five and a half years ($M=5.45$, $SD=5.00$). All novice teachers had initially attended teaching training courses and were hired based on their qualifications. The wide range of the participants' teaching experience might suggest that it affects their reflective teaching and self-efficacy beliefs as a confounding variable. The $SD (=5.00)$, however, shows that most of the teachers had taught for one to 10 years. Our subsequent frequency analysis showed that the experience of 194 respondents was within this range.

	<u>Gender</u>		<u>Academic Degree</u>					
	Male	Female	AA	BA	MA	PhD	Other	ND
Frequency	105	120	18	100	73	1	32	1
%	46.7	53.3	8.0	44.4	32.4	0.4	14.2	0.4

AA (Associate of Arts in Teaching English as a Foreign Language (TEFL)), BA (Bachelor of Arts in English Translation), MA (Master of Arts in TEFL), and PhD in TEFL, Other = other areas, ND = no academic degree

Table 1: Teachers' demographic information

Since this study involved re-validation of TEBS-Self, an explanation about the adequacy of our sample size is in order. Different sample sizes have been recommended for exploratory factor analysis. Some consider $N=50$ as a reasonable absolute minimum (De Winter, Dodou, & Wieringa, 2009), while some others recommend a minimum of 100 (e.g., Hair, Anderson, Tatham & Black, 1995). Gorsuch (1983) characterizes 200 or more as large, and Cattell (1978) regards 200-250 as acceptable, while recommending a sample size of 500. In terms of subject to item ratios, Gorsuch (1983) argues for a minimum ratio of 5:1, Cattell (1978) recommends a range of 3:1 to 6:1, and Hair et al. (1995) encourage researchers to collect data from 20 cases per variable. Costello and Osborne (2005) reported that 63.2% of the studies they reviewed had performed analyses with subject to item ratios of 10:1 or less (with more than 40% having used a maximum ratio of 5:1). Regarding confirmatory factor analysis, Kline (2011) observes "A 'typical' sample size in studies where SEM is used is about 200 cases. This number corresponds to the approximate median sample size in surveys of published articles in which SEM results are reported" (p. 12). In light of the literature reported above and the fact that we used Least Squares Estimation Method which is not strict about the sample size, we would argue that our sample size for exploratory and confirmatory factor analysis of TEBS-Self was, at least, fair, although a larger sample size would have helped us achieve more accurate results.

Data Collection and Analysis

To examine the participants' reflective thinking habits, the English language teaching reflection inventory developed by Akbari et al. (2010) was used. The instrument consists of 29 items, which constitute five components: Practical, Cognitive, Affective, Metacognitive, and Critical. The items are answered on a five-point Likert scale, ranging from 1 (Never) to 5 (Always). Akbari et al. (2010) estimated the Cronbach alpha reliability of the questionnaire to be .91. Also, they reported the construct validity of the instrument as <3 for normed Chi-Squared; $>.9$, $>.85$, and $>.08$ for GFI, AGFI and RMSEA respectively; and $>.9$ for (TLI) and (CFI), thus confirming the correspondence of the data to the CFA model and verifying the construct validity of the instrument (Akbari et al., 2010, p. 222).

TEBS-Self (Dellinger et al., 2008) was used to measure the participants' self-efficacy beliefs. This questionnaire had been developed based on three assumptions: accurate reflection of the concept of self-efficacy, examination of efficacy beliefs in the context where they are developed, and meaningfulness of tasks incorporated into the instrument. The original version of TEBS-Self has 31 items responded to on a four-point Likert scale.

We incorporated certain changes in TEBS-Self before data collection. First, the Likert scale originally consisted of four descriptors, i.e. weak, moderate, strong, and very strong. Given that "very strong" lies at one end of the scale, we added "very weak" to the other end to make it more balanced and comprehensive. Second, Dellinger et al. (2008) had included the starting statement,

“Right now in my present teaching situation, the strength of my personal beliefs in my capabilities to...” (p. 764). In the interest of simpler wording, we removed it And, instead, added “I can” to the beginning of all items. Since Dellinger et al. (2008) had explicitly avoided using “I can” to remain committed to the original definition of self-efficacy, a brief explanation is in order.

Dellinger et al. (2008) believed that most of the questionnaires developed so far measure teacher efficacy rather than teacher self-efficacy. More precisely, they gauge teachers’ ability to affect student achievement, i.e. outcome expectations, rather than their ability to “execute the *behaviours* required to produce the outcome” (Bandura, 1977b, p. 193; italics added), i.e. efficacy expectations. Therefore, by adding the abovementioned statement above the list of items and focusing on tasks rather than outcomes in the items, they tried to avoid the conceptual confusion. However, potential respondents may not recognize the intention behind the inclusion of the statement and focus mainly on the content of the items. Nor does mere avoidance of “I can” prevent respondents from confusing or combining outcome expectations with efficacy expectations. Moreover, we believe that some items imply outcomes at least as strongly as they do tasks. Some examples are “maintain a classroom climate of courtesy and respect” and “manage student discipline/behaviour.” These observations led us to add “I can” to the items and remove the initial statement.

Finally, three relatively different factor solutions were reported in Dellinger et al. (2008), each retaining some items and excluding a few. Since we could not reach a decision as to which factor structure to use in the analysis of our data, we ran exploratory and confirmatory factor analysis of the questionnaire based on our own data and used the resultant factor structure for further data analysis. Following the validation of TEBS-Self, we ran Pearson product-moment correlation, standard multiple regression, and SEM to explore the relationship between self-efficacy and reflectivity as well as their components.

Results

Construct validation of TEBS-Self

Exploratory factor analysis of TEBS-Self was carried out using Principal Components Analysis with Varimax Rotation and Kaiser Normalization (Tab. 2). To check for the factorability of data, the determinant was checked, which turned out to be 0.001, which is higher than 0.00001, and indicates that multicollinearity is not a problem for this data set. The KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy was greater than .5 (.8). Bartlett’s test of sphericity was significant ($p < .05$) and showed that the correlation matrix was not an identity matrix. Finally, we found that the VIF^1 values were around 1.5, and, concluded that there is no collinearity among the components since they were below 5 (Heiberger & Holland, 2004).

To determine the number of factors, we first ran a factor analysis based on eigenvalues greater than 1, which yielded seven factors. Some of the factors were not interpretable, and, consequently, we could not impute factor labels from factor loadings of the items grouped in those factors. Therefore, we checked different factor solutions and, considering 0.3 as the cut-off point for meaningful factor loadings, we found the four-factor solution the most interpretable.

¹ Variance inflation factors (VIF) measure how inflated the variance of the estimated regression coefficients are in comparison with when the predictor variables are not linearly related and therefore help detect multicollinearity.

The labels we assigned to them were *Efficacy for Classroom Management*, *Efficacy for Instructional Strategies*, *Efficacy for Accommodating Individual Differences*, and *Efficacy for Learner Engagement*. To do so, we made use of the names assigned by Dellinger et al. (2008) to their factors and those used by Tschannen-Moran and Woolfolk Hoy (2001) for their Teacher Self-Efficacy Scale (TSES), which is one of the most frequently used measures of self-efficacy.

Items	Factors				h ²
	Class. Manage.	Instruct. Strategies	Accom. Ind. Differences	Learner Engage.	
23	.673				.528
10	.672				.522
7	.627				.481
22	.623				.510
8	.576				.412
9	.571				.485
19	.545				.388
6	.397				.397
16		.697			.526
15		.672			.487
14		.587			.434
21		.499			.332
4		.482			.461
18		.424			.344
20		.378			.208
13			.678		.501
12			.655		.608
5			.475		.529
17			.405		.416
3			.314		.328
1				.735	.584
2				.667	.511
11				.597	.584
Eigenvalue ²	3.49	2.95	2.08	2.03	
Cumulative%	15.21	28.04	37.11	45.98	

Table 2: Results of exploratory factor analysis for TEBS-Self.

As shown in Tab. 3, the highest loading is .73 and the lowest is .31, and all of the items have generally high loadings on the factors. The whole factor structure accounts for 46% of the whole variance. Using Cronbach Alpha, the internal consistency reliabilities of Classroom Management, Instructional Strategies, Accommodating Individual Differences, and Learner Engagement were estimated to be .79, .73, .61, and .57 respectively. The reliability of the entire instrument was estimated to be .84.

² The eigenvalue for a given factor measures the variance in all the variables (here, the questionnaire items) which is accounted for by that factor.

To substantiate the above hypothetical model, we ran confirmatory factor analysis (CFA) as well. To do so, we conducted SEM using LISREL. As illustrated in Fig. 1, all of the t-values associated with the single-headed arrows are higher than 1.96, denoting significant contribution of the items to their components. All of the components have significant relationship with each other (t-value > 1.96), except for the relationship Accommodating Individual Differences has with Classroom Management and Instructional Strategies.

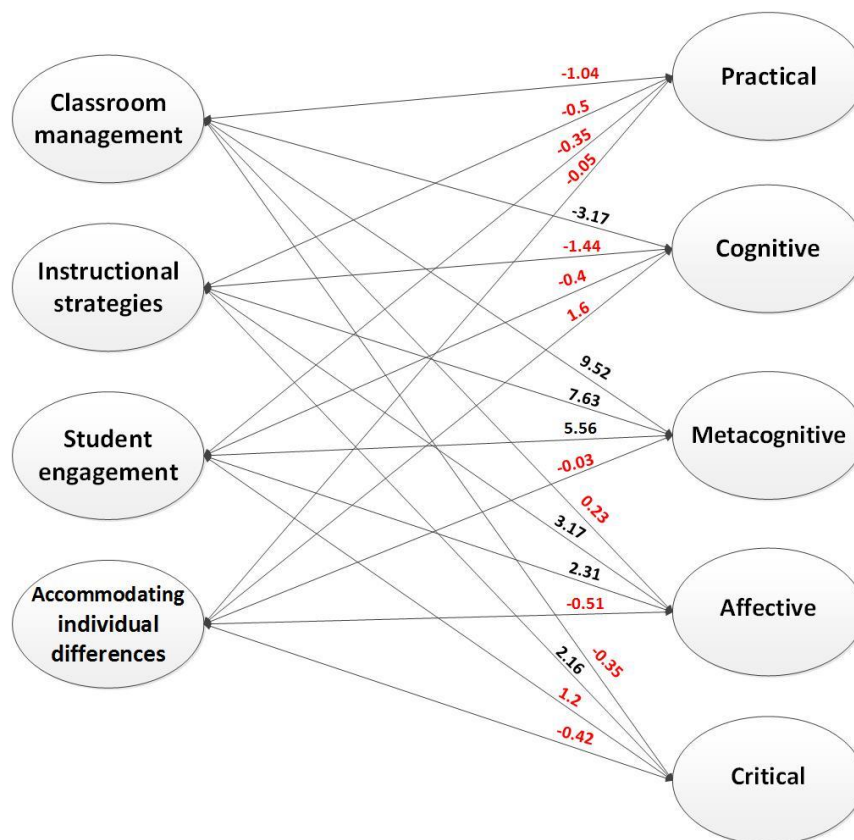


Figure 1. Fitted CFA model of TEBS-Self

Tab. 3 shows that the overall model enjoys a good fit. The ratio of chi-square over the degree of freedom is much lower than 3 (1.80). The RMSEA index of .06 also shows a good fit because the upper limit of 90% confidence interval for RMSEA is 0.069 and, thus, lower than .10 (Kline, 2011). The other indices are all equal to or higher than .90.

Chi-Square/DF	GFI	AGFI	RMSEA	90% Confidence Interval for RMSEA		IFI	CFI	NNFI
				Lower	Upper			
1.80	.96	.95	.06	.051	.069	.95	.95	.95

p < .001.

Table 3: Fit indices for the CFA model of TEBS-Self.

We used the factor structure developed above for TEBS-Self to explore the relationship between teacher self-efficacy and reflectivity as discussed below.

The relationship between reflective teaching and self-efficacy beliefs

Using Pearson product-moment correlation, we found that the correlation between reflective teaching and self-efficacy was $r = .27$ and significant at 0.01. According to Cohen's R^2 (Cohen, 1992), the effect size for this correlation is small. Since the literature reviewed above suggests that reflective teaching and perceived efficacy both contribute to each other, two standard multiple regressions were carried out in which the five components of reflective teaching were regressed against self-efficacy and the four components of self-efficacy were regressed against reflective teaching. A standard regression analysis was conducted to evaluate how components of reflective teaching predict overall self-efficacy (Tab. 4).

Variable	<i>B</i>	<i>SE B</i>	β	<i>T</i>	<i>Sig.</i>
Constant	48.414	5.640		8.584	.000
Metacognitive	1.176	.148	.470	7.918	.000
Cognitive	-.165	.177	-.063	-.931	.353
Critical	.138	.145	.062	.948	.344
Practical	.159	.189	.055	.844	.400
Affective	.300	.316	.063	.949	.344

$R^2 = .248$, $P < .05$

Table 4: Results of standard regression analysis for teachers' self-efficacy beliefs and the components of reflective teaching.

The multiple correlation coefficient was around .50, indicating that approximately 25% of the variance of self-efficacy can be accounted for by the linear combination of Metacognitive, Cognitive, Critical, Practical, and Affective components. Finally, Metacognitive reflection was shown to significantly predict self-efficacy (.47). Using Cohen's (1992) f^2 and his guidelines to measure the effect sizes for multiple regressions, we found that the effect size for teachers' self-efficacy beliefs and the components of reflective teaching is medium (.329).

A second standard regression analysis was run to investigate which components of self-efficacy beliefs have more power in predicting reflective teaching (Tab. 5).

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.</i>
Constant	73.668	5.994		12.29	.000
Classroom Management	-.167	.193	-.071	-.865	.388
Instructional Strategies	.578	.236	.210	2.454	.015
Individual Differences	-.299	.342	-.057	-.874	.383
Learner Engagement	.860	.286	.231	3.007	.003

$R^2 = .116$, $P < .05$

Table 5: Results of standard regression analysis for reflective teaching and the components of teachers' self-efficacy beliefs.

The multiple correlation coefficient, .34, indicates that approximately 11% of the variance of the reflective teaching can be accounted for by the linear combination of Classroom Management, Instructional Strategies, Accommodating Individual Differences, and Learner Engagement. Learner Engagement, in particular, was found to significantly predict reflective teaching (.86). Cohen's (1992) f^2 showed a small effect size for reflective teaching and the components of teachers' self-efficacy beliefs (.131).

Since we were also interested in exploring the relationships between the components of self-efficacy and reflective teaching, we conducted SEM using LISREL to develop the trait structure of the components; however, in Fig. 2 below we have removed the items from the structure and only report the correlations among the components (see Fig. 2).

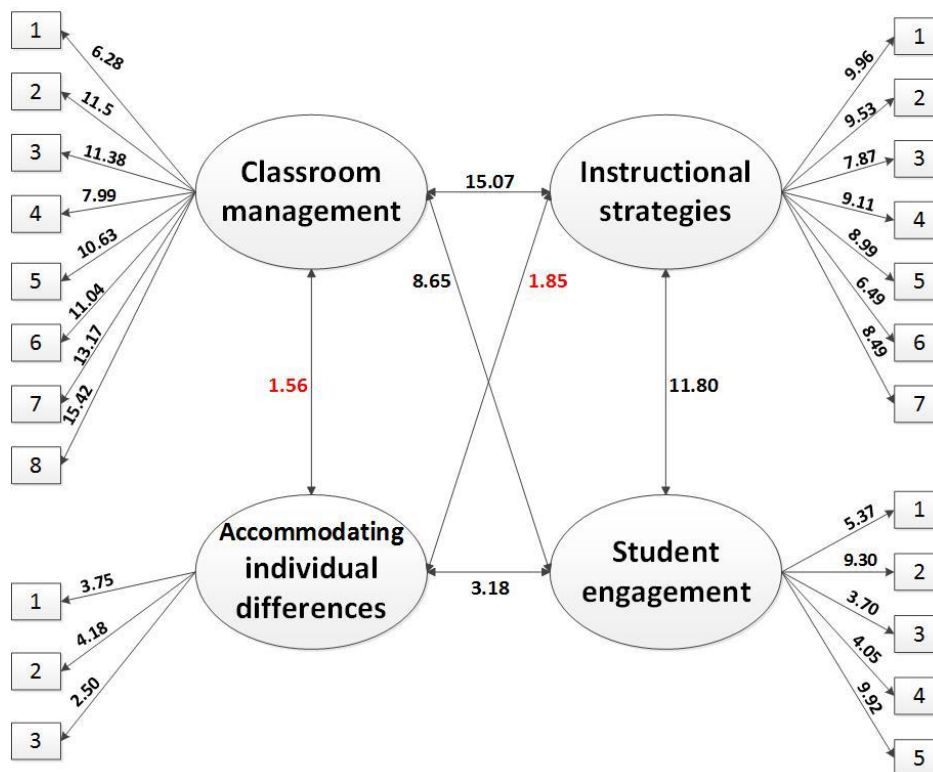


Figure 2: Correlations between the components of self-efficacy and reflective teaching

As Fig. 2 shows, Practical reflection has no significant relationship with the components of self-efficacy. Critical reflection has a significant correlation with Efficacy for Instructional Strategies only and Cognitive reflection with Efficacy for Classroom Management. Affective reflection significantly correlates with Efficacy for Instructional Strategies and Student Engagement. Finally, Metacognitive reflection, which was found to be the only predictor of self-efficacy in standard multiple regression analysis, has significant correlations with all but Efficacy for Accommodating Individual Differences, which has no significant relationship with any other reflective teaching component. Although Efficacy for Student Engagement strongly predicted teacher reflection in standard multiple regression, it has significant correlations with only two reflection components, Affective and Metacognitive reflections. On the other hand, Efficacy for Instructional Strategies has significant correlations with three components of reflective teaching, Metacognitive, Affective, and Critical reflection. Finally, the figure shows a negative relationship between and Efficacy for Classroom Management.

As it was reported above, the efficacy for Learner Engagement was the only predictor of reflective teaching, and Metacognitive reflection was the only predictor of self-efficacy beliefs. Thus, to explore the contributions of these two variables to the model, we also conducted two simple regression analyses. Tab. 6 and Tab. 7 present the results of simple regression analysis for teacher self-efficacy beliefs and the metacognitive component of reflective teaching. R^2 in the

Model Summary box indicates that 23.5 per cent of the variance in the dependent variable (teachers' self-efficacy beliefs) is explained by the model.

Source	df	SS	MS	F	Sig.
Regression	1	6466.074	6466.074	68.558	.000 ^a
Residual	223	21032.308	94.315		
Total	224	27498.382			

a. Predictors: (Constant), Metacognitive

b. Dependent Variable: Self-efficacy beliefs

Table 6: One-Way Analysis of Variance of self-efficacy beliefs and Metacognitive reflection.

To assess the statistical significance of the results, the researchers checked the results of ANOVA, which tests the null hypothesis that simple R in the population equals 0. The model shows that the results are statistically significant (Sig = .000, $p < .0005$).

Variable	B	SE B	β	t	Sig.
Constant	53.468	3.819		14.001	.000
Metacognitive	1.214	.147	.485	8.280	.000

Dependent Variable: Self-efficacy beliefs

Table 7: Results of simple regression analysis for self-efficacy beliefs and Metacognitive component.

Also, to explore the extent to which the variable included in the model contributed to the prediction of the dependent variable, the Coefficients output was checked. Column Beta shows that Metacognitive reflection has medium contribution to explaining the dependent variable based on the guidelines proposed by Cohen (1992) for simple regression. The value in the significance column indicates that this variable is making a statistically significant contribution to the equation.

Similarly, Tab. 8 and Tab. 9 present the results of simple regression analysis for reflective teaching and Learner Engagement component of teachers' self-efficacy beliefs. The value of R^2 is .085, meaning that our model explains 8.5 per cent of the variance in reflective teaching.

Source	df	SS	MS	F	Sig.
Regression	1	2686.559	2686.559	20.810	.000 ^a
Residual	223	28789.601	129.101		
Total	224	31476.160			

a. Predictors: (Constant), Learner Engagement

b. Dependent Variable: Reflective teaching

Table 8: One-Way Analysis of Variance of reflective teaching and Learner Engagement.

Variable	B	SE B	β	t	Sig.
Constant	76.503	4.381		17.462	.000
Learner Engagement	1.089	.239	.292	4.562	.000

a. Dependent Variable: Reflective teaching

Table 9: Results of simple regression analysis for reflective teaching and Learner Engagement.

Finally, the results show that Learner Engagement makes a small amount of contribution to explaining the dependent variable (reflective teaching). Its contribution to the equation, however, is statistically significant.

Discussion

Reflective Teaching and Self-efficacy

As reported above, the two general variables of reflective teaching and self-efficacy were found to have a significant but weak positive correlation with each other. Several qualitative studies, discussed in the Literature Review, have also shown a positive relationship between these two constructs (e.g., Milner & Woolfolk Hoy, 2003; Stallions, Murrill, and Earp, 2012; Runhaar et al., 2010; Thoonen et al., 2011; Woerkom, Nijhof, & Nieuwenhuis, 2002; Yeh, 2006). The small effect size of their correlation in our study can be explained in terms of Wheatley's (2002) argument that adopting a reflective approach to teaching and therefore questioning one's own teaching approach and style entails a healthy dose of efficacy doubt, as low perceived efficacy can encourage teachers to reflect on and improve their teaching. This suggests that a highly positive relationship between reflectiveness and self-efficacy is not necessarily always desirable. In fact, the weak correlation observed in this study may very well serve as empirical evidence in support of Wheatley's conceptual argument.

Teachers' Self-efficacy and Metacognitive Reflection

We identified Metacognitive reflection as the only predictor of self-efficacy beliefs. Meta-Cognition has been defined as "knowledge and cognition about cognitive phenomena" (Flavell, 1979, p. 906), "knowledge about the nature of people as cognizers" (Flavell, 1999, p.22) and the knowledge of reflection and analysis of thought (Downing, 2009). Metacognition involves higher order thinking skills such as problem solving and creating learning plans (Dunslosky & Thiede, 1998) as well as tasks that control individuals' learning including "information management strategies," "comprehension monitoring," and "the evaluation of planning and goals" (Coutinho, 2008, p. 166). All these definitions highlight reflection as an integral part of metacognition. Thus, in the studies reported below, we assume that the researchers' use of such terms as metacognitive knowledge, metacognitive skills, and metacognitive competencies essentially imply the existence of reflection within metacognition. Also, while these studies have not specifically reported a meaningful interrelation between Metacognitive reflection and teacher self-efficacy, their findings indirectly support our observation, as discussed below.

Zimmerman, Bandura, and Martinez-Pons (1992) found that high metacognition competencies lead to higher academic achievement and more pedagogical context knowledge. Also, teachers' metacognitive skills have been found to strongly affect teachers' classroom performance (Duffy, 1993; Gibson & Dembo, 1984). For example, Artzt and Armour-Thomos (1998) found that teachers who had high meta-cognitive skills "demonstrated instructional practice that was characterized by well-designed tasks and intellectually and socially stimulating learning environments" (p. 21). In contrast, teachers who had limited meta-cognitive skills designed poor tasks and were not able to properly engage students in learning environments. Sound pedagogical knowledge, high achievement, and efficient performance all produce mastery experiences, which constitute the most important source of efficacy information (Bandura, 1997b). Therefore, these findings suggest that Metacognitive reflection indirectly results in more positive efficacy perceptions, as also observed in our research, where Metacognitive reflection was shown to be the only predictor of self-efficacy beliefs with a medium effect size.

In addition to its influence on teachers' pedagogical knowledge and performance, metacognitive knowledge positively contributes to their understanding of "effectiveness of the interactions of tasks," and their own "judgement of specific problem-solving situations" (Coutinho, 2008; Flavell, 1979). Given the task- and context-specific nature of self-efficacy (Bandura, 1997b; Schwarzer & Scholz, 2000), teachers' understanding of the effectiveness of tasks and problem-solving situations directly translates into their perceptions of their own efficacy, hence the impact of metacognition on self-efficacy. This impact, however, was more explicitly reported by Ha Kim (2011), who found that early childhood educators' metacognitive knowledge contributed to teacher self-efficacy beliefs.

The SEM analysis of the correlations between self-efficacy components and those of reflective teaching also showed that Metacognitive reflection had significant correlations with three of the four components of self-efficacy, namely Classroom Management, Instructional Strategies, and Student Engagement. A few studies support this finding. With regard to Metacognition and Classroom Management, Lin et al. (2005) argue that successful teaching involves "adaptive metacognition," which they explain as "change to oneself and to one's environment, in response to a wide range of classroom social and instructional variability" (p. 245). Adaptive metacognition helps teachers deal with highly diverse situations in their classrooms, identify problems, and establish adaptive goals. Regarding how teachers' metacognition facilitates learner engagement, Pintrich (2002) observes that an important goal of teachers' honing their metacognitive skills is to help learners "become more knowledgeable of and responsible for their own cognition and thinking" (p. 219).

Reflective Teaching and Efficacy for Learner Engagement

Efficacy for Learner Engagement was identified to be the only predictor of reflective teaching. Meiers (2003) argued that reflective teaching is not a one-way process in which students are mere recipients of the outcome of teachers' reflection. "Rather, it directly engages them as participants and co-authors of a shared project-the educational, social, and moral life of their classroom" (p. 1). Therefore, reflective teachers help learners engage thoughtfully with their personal and social experiences at school. Meiers (2003) believes that this will occur only if teachers themselves are thoughtfully involved with other learners and colleagues to develop a diverse community in which various practices are transformed through learning experiences (p.4). This argument leads us to conclude that teachers' reflection skills can contribute to their ability, and, consequently, their perceptions of their ability, to engage students in the process of learning. This is in line with the observation made in the present study regarding efficacy for learner engagement serving as the only predictor of reflective teaching. However, one could argue that logically the other self-efficacy components are as strongly related to being reflective as learner engagement. The small effect size observed in this study and the fact that Efficacy for Learner Engagement only accounts for 11% of the variance in reflective teaching also tells us that this finding should be regarded with skepticism.

Cognitive Reflection and Efficacy for Classroom Management

The results of SEM reported above show a significant negative relationship between Cognitive reflection and teachers' Efficacy for Classroom Management. This finding seems to be

neither defensible nor justifiable, as “the role of teachers’ mental lives in shaping classroom events” (Borg, 2003, p. 91) and the cognitive basis of classroom management have already been documented. Doyle (1986), in this regard, argued: “Management must be presented as intellectual framework for understanding classroom events and consequences rather than simply as a collection of tricks and specific reactions to behaviour” (p. 33). This perspective has also encouraged a reflective approach to enhancing student teachers’ classroom management skills in teacher education programs (e.g., through illustrating different classroom management situations in videotapes for analysis) (Edmund & Stough, 2001). A few examples of studies which suggest links between teachers’ Cognitive reflection and their Classroom Management skills follow.

To start with, Copeland (1987) investigated the relationship between classroom management and student teachers’ cognitive abilities through measuring multiple-attention and vigilance skills, suggested by cognitive psychologists and reported to be related to successful classroom management. The findings revealed that the information-processing skills involved in vigilance and multiple attention enhance teachers’ cue observation, which is the ability to observe for cues to determine the degree to which instruction proceeds as planned. Similarly, Winitzky (1992) found a positive correlation between teacher candidates’ cognitive structure and their ability to reflect on classroom management. Finally, Edmund and Stough (2001) found that teachers with effective classroom management have a strongly reflective approach to teaching in that “they spend substantial time and care in establishing and teaching classroom routines and procedures to their students” (p. 106) through an interactive process of decision making.

These studies all reflect contributions of being reflective to effective classroom management, and, therefore, may suggest that the negative relationship between cognitive reflection and efficacy for classroom management observed in the present study is not commonsensical. However, a major difference between our research and these studies is that their focus was on teachers’ actual classroom management skills while ours was on teachers’ perceived efficacy. Given the acknowledged importance of efficacy doubts (Wheatley, 2002) mentioned earlier in this paper, the observed negative relationship could be interpreted as participants’ reflectiveness having resulted in low efficacy perceptions since reflection may have helped them identify areas of improvement in their classroom management skills. This said, a larger sample size might yield a different observation and lead to a different interpretation.

Affective Reflection and Efficacy for Instructional Strategies and Learner Engagement

As discussed in the previous section, the affective component of reflective teaching, which is concerned with teachers’ reflecting on students’ learning, behaviour, and emotional responses in the classroom (Akbari et al., 2010), was found to be significantly related to Efficacy for Learner Engagement and Instructional Strategies. Our review of literature yielded some studies which suggest related arguments and findings. A number of studies on emotions, instructional contexts, and student involvement show that teachers’ knowledge of and involvement with the emotional aspects of teaching and learning is an important factor in their interactions with students and their understanding of student involvement in learning (e.g., Meyer & Turner, 2002; Stipek et al., 1998; Turner et al., 1998).

Fredricks, Blumenfeld, and Paris’s (2004) emphasis on the emotional component of student engagement also lends support to our finding. They have conceptualized this component as students’ positive and negative feelings and reactions to teachers, peers, and the school. There are obvious similarities between this conceptualization and the focus of most of the items Akbari

et al. (2010) have incorporated into affective reflection, such as students' emotional response to teachers' instructions and their interest in the whole class and tasks. Equally supportive of our observation, Roorda, Koomen, Split, and Oort (2011) found strong connections between affective qualities of teacher-student relationships, which we believe are largely an outcome of teachers' reflection on them (Edmund & Stough, 2001), and learners' engagement and achievement.

Finally, several studies have identified teachers' emotions as a key factor which influences teachers' effective use of instructional strategies (Hargreaves, 2000; Sutton & Wheatley, 2003). The central role of teachers' emotions in their relationships with students "forms a filter for their work," and provides a situation where "teachers choose instructional strategies based in part upon the effects of these strategies on students' and teachers' emotions" (Hargreaves, 2000, cited in Sutton & Wheatley, 2003).

Critical Reflection and Efficacy for Instructional Strategies

The SEM results reported above show that Critical reflection is significantly related to Efficacy for Instructional Strategies. Akbari et al. (2010) defined the critical component of reflection as reflecting about "the socio-political dimension of teaching" (p. 215). While the literature on reflective teaching and teacher self-efficacy does not particularly support the significant relationship observed in the present study, Social Cognitive Theory within which the concept of self-efficacy has been introduced is underpinned by concepts which suggest strong links between teachers' criticality and perceived efficacy in general.

This theory takes an agentic view toward human beings and considers people as "self-organizing, proactive, self-reflecting, and self-regulating, not just reactive organisms shaped and shepherded by external events" (Bandura, 1999, p. 167). At the same time, it avoids claiming that people act upon the environment entirely independently of outside factors. Therefore, it represents the human-environment interplay in the form of Triadic Reciprocal Causation (Bandura, 1990), which puts personal factors, the environment, and human behaviour in a triadically bidirectional interaction. Similarly, critical perspectives on teaching and teacher education encourage an agentic view of the human being and simultaneous attention to the impacts of social factors characterize. On the one hand, teachers are believed to have a sense of agency, which helps them critically reflect on the status quo and actively contribute to its transformation (Kumaravadivelu, 2003). On the other hand, given the significant impact of environment on their transformative potential, teachers are encouraged to critically reflect on the opportunities and limitations in the world which influence their identity and performance and make decisions and take action in an informed and calculated manner (Freire, 1972, 1973). These overlaps between the social cognitive conception of self-efficacy and critical conceptualizations of teacher agency and its interaction with the wider society lend support to the correlation observed in the present study between critical reflection and self-efficacy.

Further, Efficacy for Instructional Strategies was found to have a significant relation with Critical reflection. We looked through the related items in both questionnaires and realized that some of the items in this efficacy component (items 6 and 7), which focus on development of students' higher order thinking abilities and helping them perform to their full potential, are largely in line with critical approaches to education. They also share similar focuses with some of the items in the component of critical reflection, such as items 23 and 25, which emphasize teachers' attempts to facilitate discussion about critical topics, which obviously enhances

learners' higher order thinking, and items 24 and 28, which focus on teachers' concerns over student empowerment and achievement.

Conclusion

Two major groups of observations were made in this study. Reflective teaching and self-efficacy beliefs were found to have a significant positive relationship. Standard multiple regression analyses also showed that Efficacy for Learner Engagement was the only predictor of reflective teaching, and Metacognitive reflection was the only predictor of teacher efficacy beliefs. Finally, SEM suggested significant positive relationships between Metacognitive reflection and most of the self-efficacy components, between Affective reflection and Efficacy for Instructional Strategies and Learner Engagement, as well as between Critical reflection and Efficacy for Instructional Strategies. While all these suggest a positive interconnection between reflection and self-efficacy, some other results pointed in other directions. The relationship between reflective teaching and self-efficacy, though significant, had a small effect size. Efficacy for Accommodating Individual Differences was not significantly related to any reflection component, and a significant negative relationship was observed between Cognitive reflection and Efficacy for Classroom Management.

The positive relationships observed in this study between some components of teacher self-efficacy and reflective teaching, especially Metacognitive reflection, suggest that incorporating a focus on (metacognitive) reflection into second language teacher education and professional development helps improve teachers' pedagogical competencies and efficacy beliefs. Despite the importance attached to teacher reflection and metacognition in the literature (Farrell, 2007; Ha Kim, 2011; Zimmerman, Bandura, & Martinez-Pons, 1992), transmission models of teacher education are still dominant in many places around the world (Imig & Imig, 2006; Richards & Farrell, 2005). These models do not prioritize fostering teacher reflection since they tend to look at teachers as more of passive technicians than reflective practitioners (Kumaravadivelu, 2003). Findings such as those of the present study suggest that for teachers to become more efficacious in their teaching, they should be given adequate space and assistance to improve their higher-order thinking skills. This results in their gaining the ability to teach more effectively and develop more positive beliefs about their efficacy. These positive efficacy beliefs, however, are not the same as "overconfidence" or "too-positive efficacy" Wheatley (2002) talks about pejoratively since they are created in light of thoughtful reflections upon teaching experiences and outcomes.

While the reviewed literature supports the first group of findings in the Discussion, no studies have reported similar insignificant or negative relationship between self-efficacy and reflective teaching. The only argument identified in the literature in line with this group of observations was Wheatley's (2002) which encourages us to recognize benefits of efficacy doubts, rather than simply assume that high self-efficacy is always a good thing. Given the conceptual nature of Wheatley's (2002) piece, we believe that our findings have begun to provide empirical evidence in support of his call for a more positive treatment of efficacy doubts. Insignificant, significant but weak, and negative relationships observed between reflection and self-efficacy and some of their components may be explained in terms of the fact that, because reflection heightens teachers' awareness of their areas of improvement, it results in a decrease in their perceived efficacy at some stages of their career. In other words, thinking critically about

how we teach entails a healthy dose of uncertainty about our teaching skills. Thus, a reflective teacher may have low self-efficacy in certain aspects of their pedagogical practice because they question their skills in those aspects. This means that teachers should not be judged for having low self-efficacy. Rather, a perspective which celebrates not very positive efficacy perceptions as an indication of a reflective approach to teaching and treats high self-efficacy with caution should be incorporated into teacher education and evaluation policies and practice. Highlighting teacher educators' tendency toward too much certainty, Winograd (1998) encourages promoting more uncertainty in teacher education: "Much of what we tell and show students should be punctuated with tentativeness, caveats, and clear invitations to challenge the theories and assumptions of teacher educators" (p. 304).

In light of these two different groups of findings, we argue for a balanced emphasis on teachers having positive perceptions of their teaching abilities and encouraging and helping them to identify areas in which they can improve them. In the context of teacher education, this means that a reflective component should be incorporated into how teacher learners draw upon the sources of efficacy information Bandura (1997b) has proposed (e.g., mastery experiences, vicarious experiences, social persuasion, and emotional and physiological states), which were briefly introduced under Teacher Self-efficacy in Literature Review. To be more specific, while opportunities should be provided for teacher learners to experience mastery, observe their peers' achievements, receive encouragements, and get excited about and feel satisfied with their development and achievements, they should also be encouraged and enabled to think about alternative and, perhaps more effective, ways of achieving what they and their peers aim to achieve, be given constructive feedback to facilitate their reflective thinking, and be assisted to remain reflective in emotionally challenging situations.

Suggestions for Further Research

Future research should take into account certain issues which we could not address in the present study. The literature on factor analysis recommends using separate data sets for exploratory and confirmatory factor analyses (Bandalos & Finney, 2010). However, due to the limitations with which we were faced in our data collection, we could not follow this recommendation, which might have affected construct validation of TEBS-Self. Studies within the area of English language teaching may benefit more from using instruments which are specific to this area, like the ELT Context-Specific Teacher Efficacy Instrument (Akbari & Tavassoli, 2014), which was developed after we collected our data. As with TEBS-Self in this study, though, the validity of these recently developed instruments should be further examined. To help establish the international significance of this line of research, other researchers who have access to participants from other countries may conduct comparative studies to explore any variations or similarities in the interrelations of reflective teaching and self-efficacy across different regions.

Finally, a more meaningful and richer understanding of how reflective teaching and self-efficacy beliefs are related is gained if the topic is approached through other research methodologies, as discussed by some teacher efficacy researchers such as Labone (2004) and Wheatley (2005). Qualitative studies, for example, can be conducted through interviews or focus groups, where the components identified in the validated instruments can be translated into open-ended questions. Studies of this nature can actually help with more in-depth analysis and

interpretation of the kinds of findings reported in this study, especially negative and insignificant relationships. The quantitative nature of our study may have been the reason why a typical Iranian aspect did not emerge. Therefore, a qualitative component would have likely provided more insight into the observed complex interconnections between reflection and self-efficacy. This leads us to our last suggestion which is conducting mixed-methods studies on teacher self-efficacy and reflection in order to develop an extensive picture of how these two constructs are interconnected and an in-depth understanding of the reasons behind their complex relationship.

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Appendix A: Reflective Teaching Instrument

(Akbari, , Behzadpoor, & Dadvand, 2010).

Please specify your biographical information below:

Code: **Gender:** ☐ Female ☐ Male **Teaching experience**
Degree: ☐ AA ☐ BA ☐ MA **(years):**
Area: ☐ TEFL ☐ English ☐ Other ☐ PhD ☐ Other (please specify)
 Translation (please specify)

Dear Teacher,

This questionnaire is meant to explore your actual teaching practices as a professional teacher. To this end, your careful completion of the questionnaire will definitely contribute to obtaining accurate data and arriving at valid conclusions. Therefore, please check the box which best describes your teaching practice. The information will be kept confidential and will be used for research purposes only. Thank you very much in advance for your time and cooperation.

Items	Never	Rarely	Sometimes	Often	Always
1. I have a file where I keep my accounts of my teaching for reviewing purposes.	1	2	3	4	5
2. I talk about my classroom experiences with my colleagues and seek their advice/feedback.	1	2	3	4	5
3. After each lesson, I write about the accomplishments/ failures of that lesson or I talk about the lesson to a colleague.	1	2	3	4	5
4. I discuss practical/theoretical issues with my colleagues.	1	2	3	4	5
5. I observe other teachers' classes to learn about their efficient practices.	1	2	3	4	5
6. I ask my peers to observe my teaching and comment on my teaching performance.	1	2	3	4	5
7. I read books/articles related to effective teaching to improve my classroom performance.	1	2	3	4	5
8. I participate in workshops/conferences related to teaching/learning issues.	1	2	3	4	5
9. I think of writing articles based on my classroom experiences.	1	2	3	4	5
10. I look at journal articles or search the internet to see what the recent developments in my profession are.	1	2	3	4	5
11. I carry out small scale research activities in my classes to become better informed of learning/teaching processes.	1	2	3	4	5

12. I think of classroom events as potential research topics and think of finding a method for investigating them.	1	2	3	4	5
13. I talk to my students to learn about their learning styles and preferences.	1	2	3	4	5
14. I talk to my students to learn about their family backgrounds, hobbies, interests and abilities.	1	2	3	4	5
15. I ask my students whether they like a teaching task or not.	1	2	3	4	5
16. As a teacher, I think about my teaching philosophy and the way it is affecting my teaching.	1	2	3	4	5
17. I think of the ways my biography or my background affects the way I define myself as a teacher.	1	2	3	4	5
18. I think of the meaning or significance of my job as a teacher.	1	2	3	4	5
19. I try to find out which aspects of my teaching provide me with a sense of satisfaction.	1	2	3	4	5
20. I think about my strengths and weaknesses as a teacher.	1	2	3	4	5
21. I think of the positive/negative role models I have had as a student and the way they have affected me in my practice.	1	2	3	4	5
22. I think of inconsistencies and contradictions that occur in my classroom practice.	1	2	3	4	5
23. I think about instances of social injustice in my own surroundings and try to discuss them in my classes.	1	2	3	4	5
24. I think of ways to enable my students to change their social lives in fighting poverty, discrimination, and gender bias.	1	2	3	4	5
25. In my teaching, I include less-discussed topics, such as old age, AIDS, discrimination against women and minorities, and poverty.	1	2	3	4	5
26. I think about the political aspects of my teaching and the way I may affect my students' political views.	1	2	3	4	5
27. I think of ways through which I can promote tolerance and democracy in my classes and in the society in general.	1	2	3	4	5
28. I think about the ways gender, social class, and race influence my students' achievements.	1	2	3	4	5
29. I think of outside social events that can influence my teaching inside the class.	1	2	3	4	5

Appendix B: Teachers' Self-efficacy Beliefs Instrument

(Adapted from Dellinger, Bobbett, Olivier, & Ellett, 2008)

Direction: Thank you for agreeing to participate in this study. This survey is part of research on teachers' self-efficacy beliefs in their teaching profession. Please indicate the extent of your personal beliefs in your capabilities by marking one of the five responses in the columns on the right side. Your careful completion of the questionnaire will definitely contribute to obtaining accurate data and arriving at valid conclusions. Your responses will remain confidential.

Right now in my present teaching situation...		Very weak belief	Weak belief	Moderate belief	Strong belief	Very strong belief
1	I believe I can plan activities that accommodate the range of individual differences among my students.	1	2	3	4	5
2	I believe I can plan evaluation procedures that accommodate individual differences among my students.	1	2	3	4	5
3	I believe I can use allocated time for activities that maximize learning.	1	2	3	4	5
4	I believe I can clarify directions for learning routines.	1	2	3	4	5
5	I believe I can maintain high levels of student engagement in learning tasks.	1	2	3	4	5
6	I believe I can redirect students who are persistently off task.	1	2	3	4	5
7	I believe I can maintain a classroom climate of courtesy and respect.	1	2	3	4	5
8	I believe I can maintain a classroom climate that is fair and impartial.	1	2	3	4	5
9	I believe I can communicate to students the specific learning outcomes of the lesson.	1	2	3	4	5
10	I believe I can communicate to students the purpose and/or importance of learning tasks.	1	2	3	4	5
11	I believe I can implement teaching methods at an appropriate pace to accommodate differences among my students.	1	2	3	4	5
12	I believe I can utilize teaching aids and learning materials that accommodate individual differences among my students.	1	2	3	4	5
13	I believe I can provide students with opportunities to learn at more than one cognitive and/or performance level.	1	2	3	4	5
14	I believe I can clarify student misunderstandings or difficulties in learning.	1	2	3	4	5
15	I believe I can provide students with specific feedback about their learning.	1	2	3	4	5
16	I believe I can provide students with suggestions for improving learning.	1	2	3	4	5
17	I believe I can monitor students' involvement during learning tasks.	1	2	3	4	5
18	I believe I can adjust teaching and learning activities as needed.	1	2	3	4	5
19	I believe I can manage students' discipline/behavior.	1	2	3	4	5
20	I believe I can involve students in developing higher order thinking skills.	1	2	3	4	5
21	I believe I can motivate students to perform to their fullest potential.	1	2	3	4	5
22	I believe I can maintain a classroom environment in which students work cooperatively.	1	2	3	4	5
23	I believe I can successfully maintain a positive classroom climate.	1	2	3	4	5